SECTION 3 - SECTION 4(F) EVALUATION

3.1 Introduction

The property protected by Section 4(f) and potentially affected by the proposed alternatives is the Fort Street (M-85) bascule bridge over the Rouge River in Detroit.

Section 4(f) of the 1966 Department of Transportation Act specifies that publicly-owned land from a park, recreation area, or wildlife/waterfowl refuge of national, state or local significance or any land from a historic site of national, state, or local significance may not be used for transportation projects unless: (1) there is no feasible and prudent alternative to the use of such land; and (2) the proposed project includes all possible planning to minimize harm.

This Section 4(f) Evaluation discusses the proposed project, its potential impact to Section 4(f) property, avoidance alternatives, and measures to minimize harm. Based on the following evaluation, a preliminary determination has been made that the bridge replacement will impact a 4(f) resource, all alternatives have been fully evaluated, and measures will be taken to minimize the impacts to the Section 4(f) property. Upon considering comments received from resource agencies and the public concerning the bridge replacement, the Federal Highway Administration will either apply the Section 4(f) Evaluation and document the project files or prepare a separate final Section 4(f) document for processing under the procedures set forth in the Federal Highway Administration regulations 23 CFR 771.135.

3.2 Proposed Action and Need for the Project

The primary purpose of the proposed project is to correct deficiencies of the bascule bridge so traffic flow on Fort Street (M-85) over the Rouge River, as well as boat traffic within the river channel, can be maintained. The secondary purpose is to establish a traffic flow preference for M-85.

The need to rehabilitate or replace the bridge is driven by its deteriorating condition. Specific bridge deficiencies include inward pier migration, structural deterioration, inadequacies in the electrical and mechanical systems, a substandard fender system, and a horizontal clearance that does not meet current U.S. Coast Guard standards. Refer to *Section 1.1.3* of the Environmental Assessment for a further description of specific bridge deficiencies.

3.3 Historic 4(f) Property

Description. The Fort Street Bascule Bridge, erected in 1922, is a double-leaf Chicago-style bascule bridge served by two approach structures. Refer to Section 1.1.1 for a detailed description of the bridge. See Appendix A for photographs of the bridge.

Ownership. Currently the bridge is owned by MDOT, with routine maintenance performed under special agreement by the Wayne County Road Commission for the department.

Historic Significance. The State Historic Preservation Office (SHPO) verifies the historic nature of the bridge in its November 28, 2000, letter to MDOT (Appendix C). The Fort Street Bascule Bridge, despite continued deterioration and loss of architectural integrity, remains eligible for listing on the National Register of Historic Places under Criteria A, B and C[1]. The bascule bridge itself represents complex engineering and therefore is eligible under Criterion C. The bridge is also significant for its connection with the explosive growth of Detroit in the face of unprecedented industrial expansion, an expansion that was critical to the economic growth of the nation in the Post World War I period (Criterion A). As a gateway into a modern and flourishing city, its rising bascule spans permitted an unobstructed channel to the factories that helped fuel the growth of the city. Criterion A is also expressed by its connection with the Hunger March of 1933, a key event in the rise of the *International Union, United Automobile, Aerospace and Agricultural Implement Workers of America*, commonly referred to as the United Auto Workers Union (UAW). Criterion B is met because the Fort Street Bridge and the bascule bridges at Jefferson and Dix avenues, were leveraged by Henry Ford along with navigation improvements to the Rouge River to assure freighters could reach his docks with no delays.

Under direction of the War Department, the Army Corps of Engineers transformed what was little more than a winding stream into a 300 foot wide, 22 foot deep shipping channel capable of efficiently handling large-scale freighter traffic. Like the Jefferson Avenue Bascule Bridge, the Fort Street Bascule Bridge replaced earlier swing type bridges that were determined to be obsolete in the face of the federal government's plans to modernize the Rouge River to better serve the expanding Ford Rouge complex (which had been a critical defense supplier during World War I) and other industries upstream.

The Fort Street Bascule Bridge was erected in 1922 by the Wayne County Road Commission, headed by the dynamic team of Edward N. Hines, John S. Haggerty, and William F. Butler, locally prominent and visionary leaders in the Wayne County Road Commission. Leroy C. Smith was the engineer manager, and working under him were Harry A. Shuptrine, bridge engineer, and Lewis M. Gram, consulting engineer. The Chicago Bascule Bridge Company, experienced with this type of structure, served as design engineers. The contractors included Greiling Brothers Company (substructure), Bethlehem Steel Bridge Corporation (superstructure), Turner Engineering Company (electrical) and Wolverine Engineering and Construction, who performed the construction of architectural elements. The Fort Street Bascule Bridge was one of three double-leaf bascule bridges built across the River Rouge during the 1920s. Built the same year

[1] The National Register of Historic Places was established in the National Historic Preservation Act of 1966 (NHPA). The register is administered by the Secretary of the Interior. While listing is primarily honorific, the register does offer some benefits and limited federal protections, including Section 106 review and Section 4(f) provisions in the Federal Highway Act of 1966. It should be noted that eligibility for listing, not just listing, triggers the Section 106 of the NHPA and Section 4(f) mandates. The register provides four Criteria. Criterion A applies to properties associated with events that have made significant contribution to the broad patterns of our history. Criterion B applies to properties associated with the lives of persons significant in our past. Criterion C is for properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. Criterion D is used where a property is potentially eligible if they have yielded, or may be likely to yield, information important in prehistory or history. Typically properties must be at least fifty years old for consideration, however a property of exceptional importance can be eligible earlier.

was the nearby Jefferson Avenue Bascule Bridge. The Dix Avenue Bascule Bridge, built in 1926, is a close kin in design and dimensions.

World War I was a critical trigger to Detroit's explosive economic growth in the 1920s, centered on the burgeoning automobile industry. The Rouge River was a prime location for industrial expansion, in large part influenced by Henry Ford's decision to build his dream facility, the massive Ford Rouge complex, where he could control the production of automobiles from raw material to showroom ready. Ford had already revolutionized auto production by introducing large-scale mass-production techniques. His still new Highland Park plant was unable to meet production demands, but the full development of the Rouge plant would take many years to fulfill.

Ford, however, recognized political expedience and moved quickly to open his Eagle boat factory. The factory supplied eagle boats, used as submarine chasers, to the United States World War I effort. The craft were important to the national defense, but also infused cash into Ford's coffers. It also provided the political clout to influence public investment in major transportation improvements – roads and bridges—that would be needed for his processing and manufacturing plants to be viable.

Ford's five-dollar-a-day wage structure was another revolutionary shift in industry. Ford's willingness to pay a higher wage was designed to forestall efforts to organize his workers. With the relatively high wage came more intrusive elements of Ford's paternalism, including strict control of workers within the plants, and oversight of their private lives as well. In addition, workers lacked any form of "safety net" during economic hard times. In 1932, a march was organized by the unemployed councils to call attention to the dire condition of the unemployed. The march was one of the defining moments that led to the creation of the UAW. The story of the Hunger March is summarized on the State Historical Marker displayed on the bridge operator's house:

FORD HUNGER MARCH

On March 7, 1932, in the midst of the Depression, unemployed autoworkers, their families and union organizers braved bitter cold temperatures and gathered at this bridge, intent on marching to the Ford Rouge Plant and presenting a list of demands to Henry Ford. Some three thousand "hunger marchers" paraded down Miller Road. At the city limit Dearborn police blocked their path and hurled tear gas; the marchers responded with rocks and frozen mud. Near Gate No. 3 the demonstrators were bombarded by water from firehoses and a barrage of bullets. In the end, five marchers were killed, nineteen wounded by gunfire and numerous others by stones, bricks and clubs. Newspapers alleged the marchers were communists, but they were in fact people of all political, racial and ethnic backgrounds.

Four of the deceased were white[2] and were buried at Woodmere Cemetery. The fifth decedent, Curtis Williams, was black. According to Shelton Tappes in *Untold Tales, Unsung Heroes*, this man was refused internment with the others.[3] Eventually, his remains were cremated and scattered over the Rouge plant by airplane.

[2] Joseph DeBlasto, Joseph York, Joseph Bussell & Coleman Leny

[3] Moon, Elaine Latzman. Untold Tales, Unsung Heroes. An Oral History of Detroit's African-American Community, 1918-1967. Detroit: Wayne Sate University Press, 1994.

3.4 Impacts on the Section 4(f) Property

Alternative A, Alternative B, and replacement on a 5° skewed alignment call for the removal and replacement of the bridge and would be considered an adverse effect.

No Action Alternative
This strategy involves no commitments beyond normal and routine maintenance activities. This approach would not address the Purpose and Need and the bridge would continue to deteriorate, resulting in an eventual closure and possible failure of the structure. Therefore, this alternative is not recommended but is used as a benchmark for analyzing the other alternatives.

Replacement on Existing Alignment (Alternative A)
Alternative A, shown in Exhibit 2, would build the new bridge on the same alignment as the existing bridge. This alternative would not address the intersection problems at the junction of Oakwood Boulevard and South Fort Street, which would fail to meet a significant element of the project Purpose and Need. Also, this alternative would create special engineering challenges to avoid existing and active utility tunnels which run beneath the existing bridge piers. Alternative A would require a long-term detour of two or more years because full demolition would be required prior to the construction of the new bridge.

Preferred Alternative - Replacement a 13° Skewed Alignment (Alternative B)
Alternative B, illustrated in Exhibit 4, would construct the new bridge 13° south of the existing alignment. This skewed alignment would allow for geometric improvements at the substandard junction of Oakwood Boulevard and South Fort Street. The new alignment would require right-of-way from Marathon Oil and the Wayne County Department of Public Works (vacant land at the southwest quadrant), Morton Salt (a portion of a salt storage yard at the southeast quadrant), and a portion of the parking lot at the corner of Oakwood Boulevard and Denmark Avenue. A very small amount of right-of-way would also be needed from the parcel located at the corner of Fort and Reisener streets across from Morton Salt. Alternative B would allow the potential retention of the operator's house (and related pier structure) for use in a proposed labor history/transportation interpretive site.

Replacement on 5° Skewed Alignment (Alternative C)
Replacing the new bridge 5° south of the current alignment, as shown in Exhibit 5, would result in unacceptable geometrics at both the westerly and easterly approaches and would require the taking of potentially historic residential properties on the south side of Fort Street, east of Reisener Street. This alternative has been removed from consideration because of the unsatisfactory geometrics but was initially considered for study as an alternative because it would not require a detour.

3.5 Avoidance Alternatives

Rehabilitation of the Existing Bridge (Alternative D)
The historic bridge would be rehabilitated to meet current American Association of State Highway and Transportation Officials (AASHTO) standards while following the Secretary of Interior Standards for Rehabilitation. This alternative was not carried forward because there are

no known feasible ways to stop the active inward migration of the bridge piers. Rehabilitation of the existing bridge would also preclude improvements to the Oakwood Boulevard - South Fort Street intersection and this would not meet U.S. Coast Guard's navigable width of 135 feet between the fendering system.

Building on a New Location without Removing the Existing Bridge (Alternative E)
Under this alternative, the existing historic bridge would be retained but be closed to vehicular or all traffic. A new crossing would be developed at an alternate location. This alternative was not considered as there are no feasible or prudent alternate crossing points.

Relocation of the Bridge to a New Site (Alternative F)
The historic bridge would be relocated and reconstructed at a new location, while a new bridge would be constructed on the existing alignment. This alternative would not be feasible or prudent due to the high costs of reconstruction and dismantling, storing and transporting the bridge components; all of this presuming an appropriate location could be identified and secured for relocation.

3.6 Measures to Minimize Harm

Proposed mitigation measures appear in a draft Memorandum of Agreement (MOA) between FHWA, the SHPO, and MDOT. See Appendix G for the draft MOA.

3.6.1 Full Recordation of the Bridge Prior to Demolition (see Section 3.6.4)

Proposed mitigation measures to record the bridge and neighboring area include:

- Photographic documentation of structure, site, interior spaces, and machinery
- Measured drawings of exterior and interior and plan and elevation views
- Textual history and description of the bridge
- Documentation of historical graphics including plans, specifications, press releases, articles, and historic photographs
- Textual and photographic documentation of the immediate neighborhoods on both sides of the existing bridge

3.6.2 Development of an Architecturally Appropriate Bridge Design

The new bridge needs to be treated as a gateway bridge and the design will be architecturally appropriate. The design should draw from design trends prevalent during the period of prime significance for the bridge, roughly 1920 to 1945. The SHPO will be consulted through the design phase and will be invited to comment on the bridge design and approach design.

3.6.3 Establishment of an Interpretive Site Adjacent to the New Bridge

The interpretive site will be linear and located within MDOT right-of-way adjacent to a parcel currently owned by the CSX Corporation. The site would:

- Interpret site significance in development of the UAW (including display of the existing state register marker)
- Interpret the significance of the site/bridge to the development of Detroit/Dearborn as industrial cities in post World War I
- Provide linkage with Ford Rouge Plant tourism and regional GreenWays Initiative
- Provide landscape design compatible with the Rouge River Gateway Master Plan

One option under study is the retention of the existing operator's house and a portion of bridge pier structure for incorporation into an interpretive site. If feasible, MDOT would stabilize and secure the interior and stabilize and restore the exterior of the operator's house. A crucial element of feasibility would be the identification of the appropriate agency, agencies, and/or stakeholders to assume responsibility for maintaining and promoting the facility once completed. These agencies and stakeholders would be included during discussions concerning site design.

3.6.4 Publication of Historic Bridge Documentation (see Section 3.6.1)

Using the materials collected and developed for the bridge documentation discussed in section 3.6.1, MDOT would produce a popular history of the bridge and distribute it to appropriate repositories, including the State Library and Archives, Detroit and Dearborn public libraries, Wayne State University, and other potential recipients. Additional copies may be made available through MDOT or possibly through selected repositories, on-request and through just-in-time production.

3.7 Coordination

Coordination regarding the historic resource associated with the Fort Street bridge project has been ongoing. Effects of the bridge replacement, the alternatives considered, and the proposed measures to minimize harm were reviewed by and developed in consultation with the State Historic Preservation Officer.

MDOT has coordinated with local public agencies and citizen groups concerning the project and will hold a public hearing. The availability of this document and the public hearing will be advertised locally.

3.8 Conclusion

Based on the considerations contained in this Section 4(f) Evaluation, there is no prudent and feasible alternative to using the historic property described in this section. The proposed bridge replacement includes all possible planning to minimize harm to this resource from such use.